



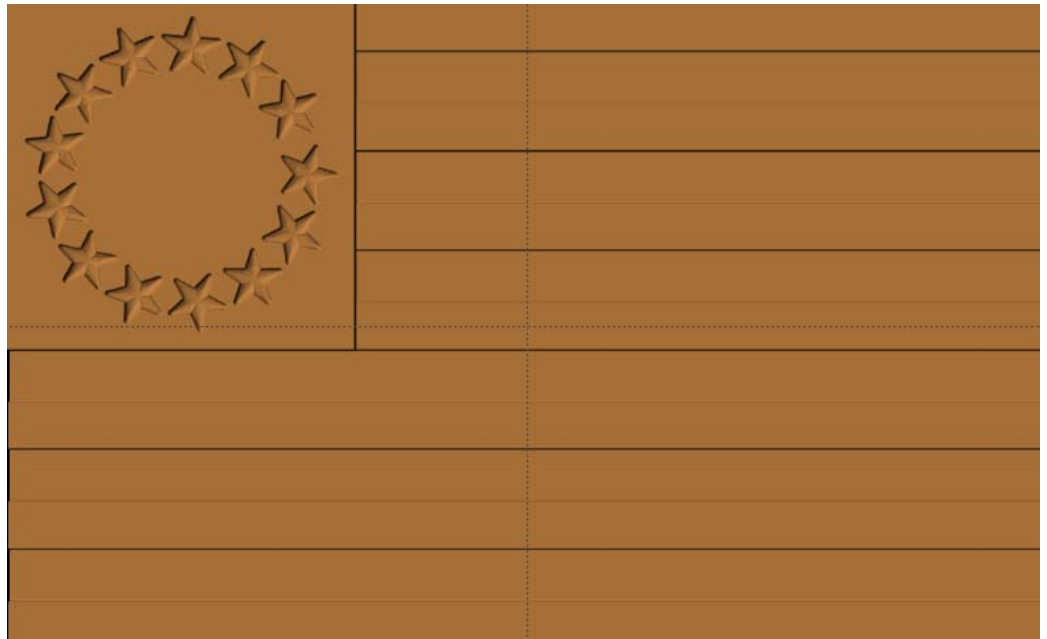
PATTERNING AN ELEMENT ALONG A TRAJECTORY

IN THIS EXERCISE WE WILL SHOW YOU HOW TO CREATE A BETSY ROSS FLAG USING THE PATTERN ALONG TRAJECTORY TOOL AND STAR 01 PATTERN AND REPLICATE A CARVED REGION USING THE COPY OFFSET OPTION FOUND IN THE 2D VECTOR DRAWING SUITE.

NOTE: THIS PROJECT USES THE STAR 01 PATTERN FROM THE BASIC PATTERN LIBRARY AND THE COPY OFFSET OPTION FOUND IN THE 2D VECTOR DRAWING SUITE BUT OFFERS AN ALTERNATIVE FOR THOSE THAT DO NOT HAVE THE 2D VECTOR DRAWING SUITE.

This project covers the following design concepts:

- CREATING A TRAJECTORY PATH FOR THE PATTERN TO FOLLOW
- ADDING A CARVING ELEMENT TO THE TRAJECTORY
- SPECIFYING THE NUMBER OF PATTERN INSTANCES
- USING THE COPY OFFSET FOUND IN THE 2D VECTOR DRAWING SUITE



The Welcome Screen will appear upon starting of the Designer Software.

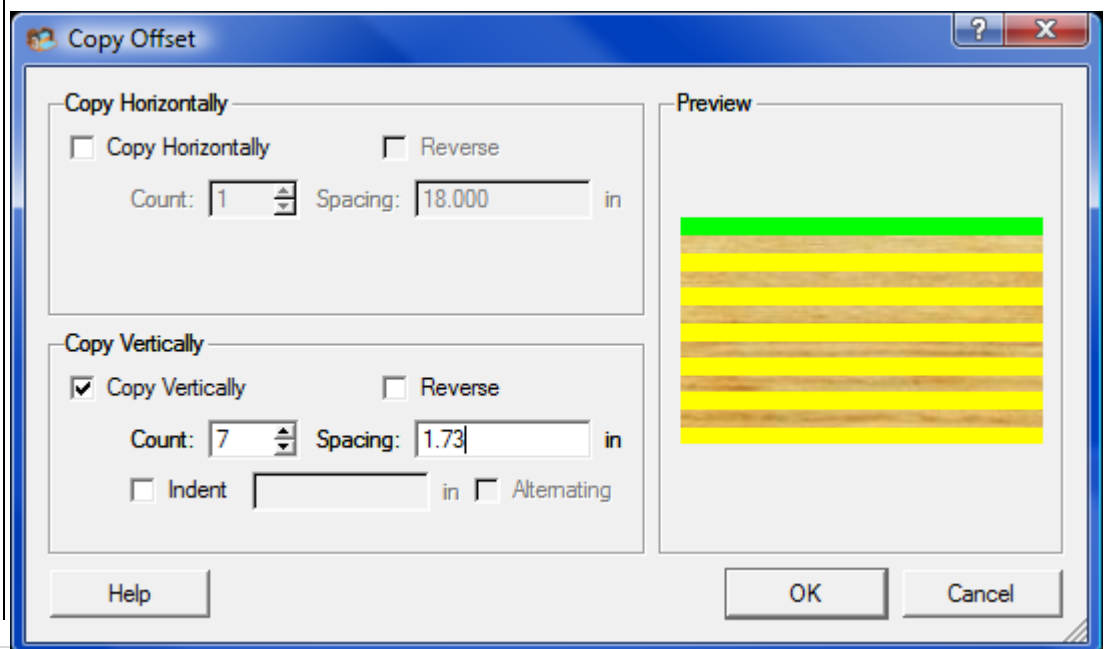
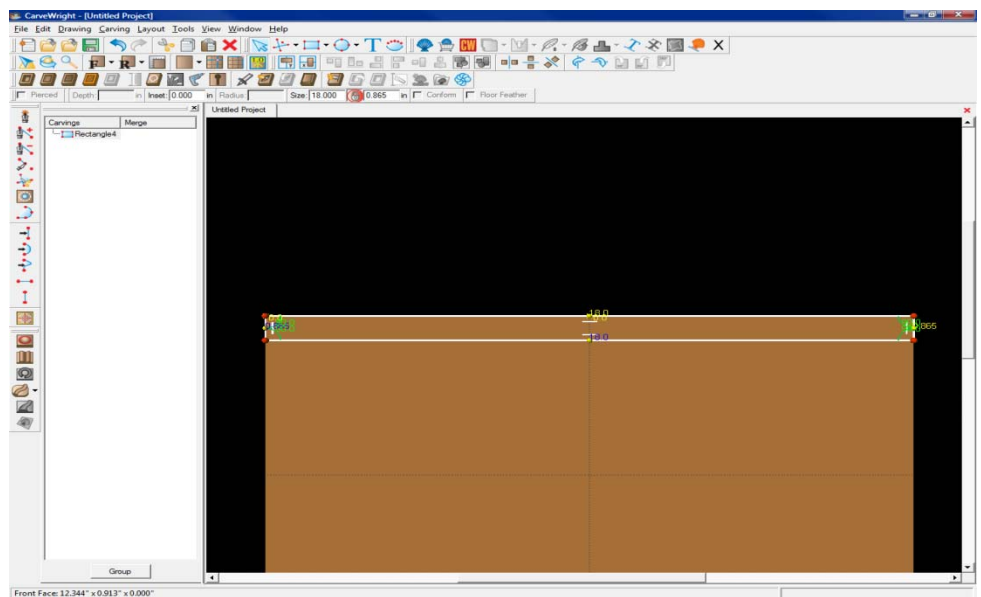
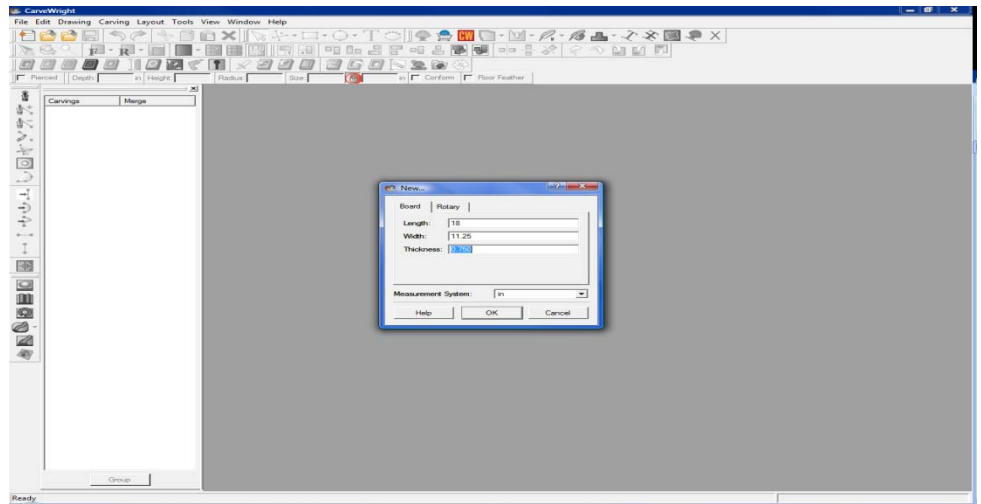
Select **New Project** and create a board that is 11-1/4" wide by 18" long by 3/4" thick.

➤ CREATING THE STRIPES FOR THE FLAG

Now that we have our board set we can get started on the flag. The first step is going to be adding the stripes. We will start at the top with a rectangle that is 18" long and 0.865" wide. Center the Rectangle on the board using the **Center Horizontal** option. Next we will give the rectangle a carve region with a depth of 0.1" and this will be our depth for all red stripes.

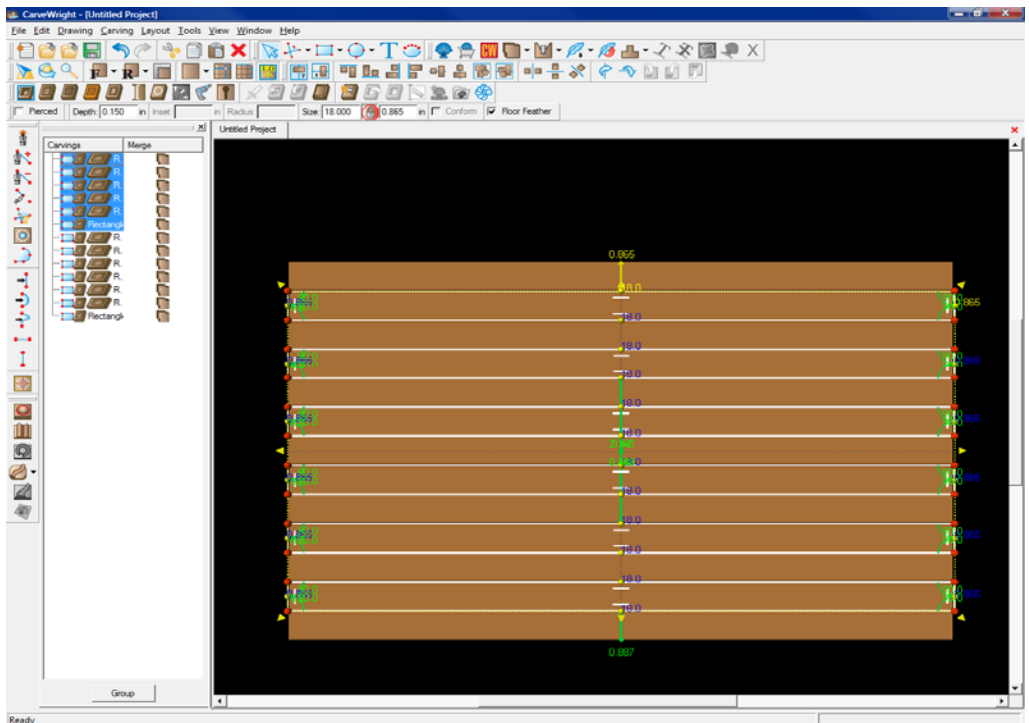
➤ USING COPY OFFSET TO REPLICATE A CARVED REGION

If you have the 2D Vector Drawing Suit then you can right click on the rectangle that we have set and select Copy Offset. We want a vertical offset with the count set to 6 and a spacing of 1.73" and this will give us all of our red stripes automatically.



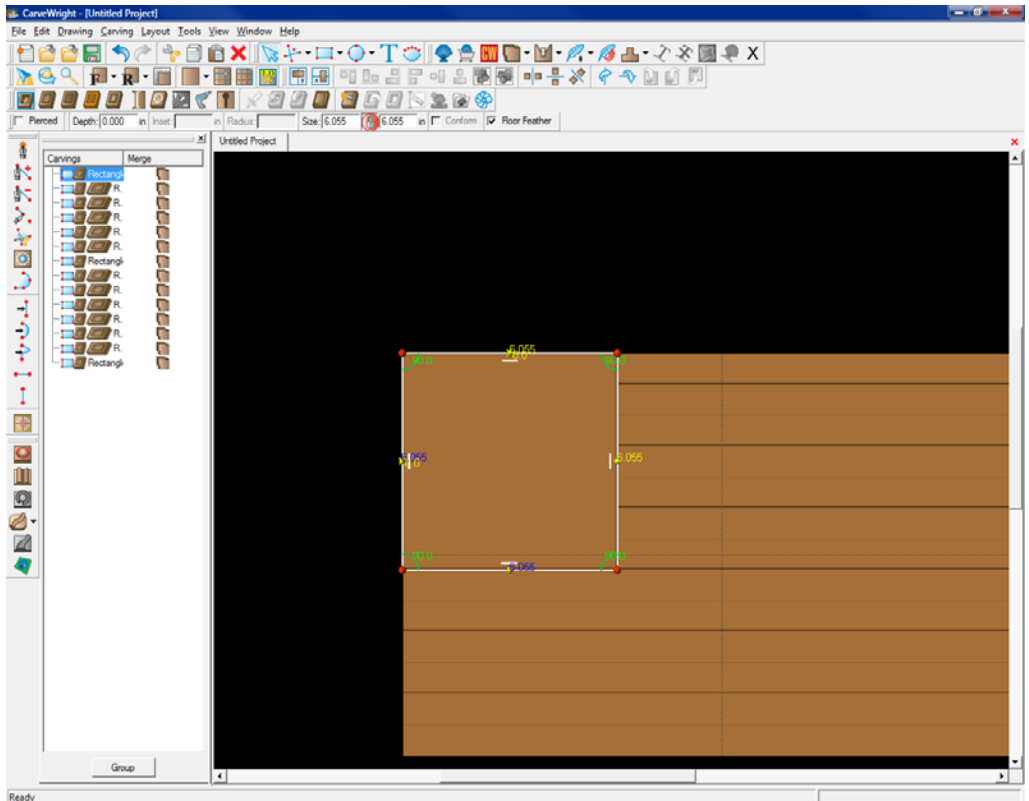
For those that do not have this feature we will need to copy the rectangle we already have and place copies every 1.73" so that we have our 7 red stripes.

Next we need to add our white stripes to the project this will be a similar process with us starting 0.865" from the top and making out first 18" x 0.865" stripe with a depth of 0.15". Then we will either copy and paste the other stripes or use the copy offset.



➤ CREATING THE BLUE FIELD FOR THE STARS

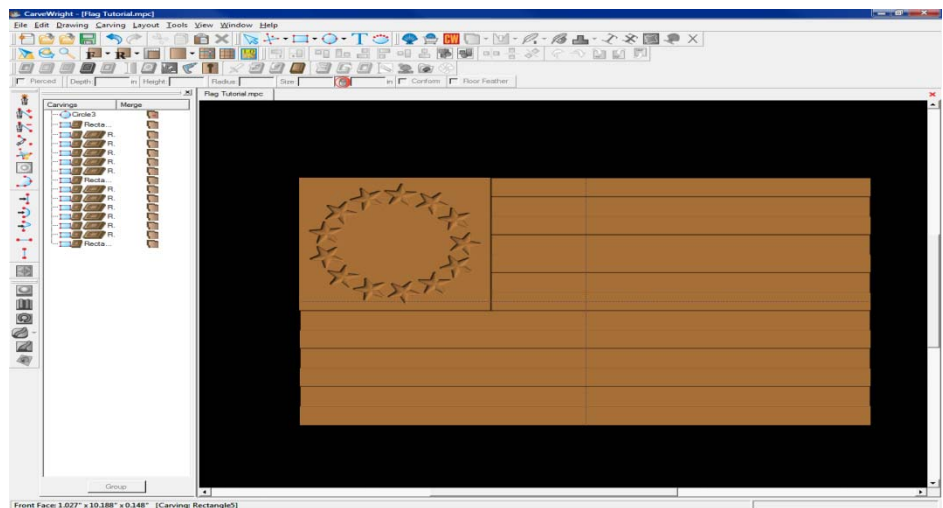
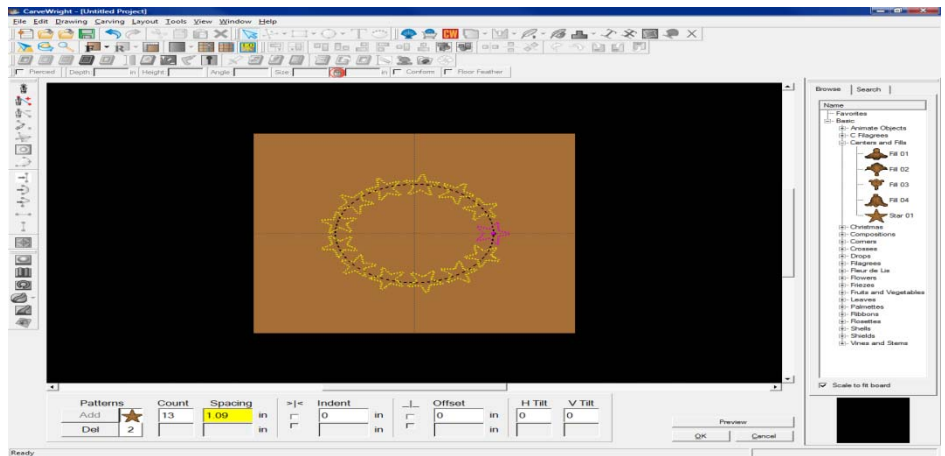
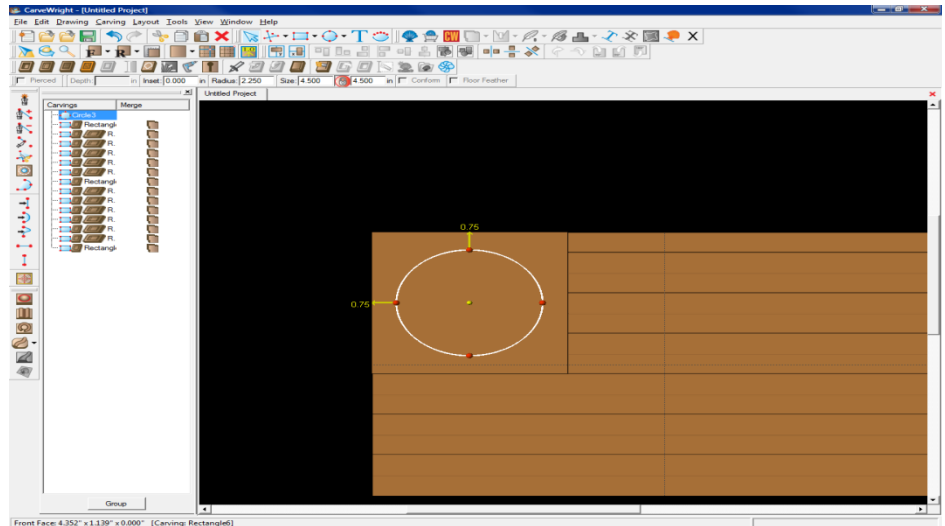
Now that we have all of our stripes placed we can add the blue field for the stars. When we look at the reference image we can see that the field is a square that is the width of 7 of our stripes. So that gives us a length of 6.055" for the square. So we will use the Square Tool and place that in the top left corner of our flag. We will make this a carved region with a depth of 0.00". This will remove the portions of the strips that are under the blue.



CREATING THE TRAJECTORY AND APPLYING THE PATTERN



Now we need to place our circle in the center for the stars to go around. We want a radius of 2.25" on the circle and to have it as close to centered on the square as possible, this can be done with restraints as shown. Now we need to attach our patterns to the circle using the Pattern Along Trajectory Tool. Once the tool is open we need find the star we are using, which is under Centers and Fills and named Star 01. After selecting the pattern click on the Add button in the lower left corner of the screen to add the pattern to the trajectory. The count should be set to 13 and the size to 1.000" x 0.950". Depth should be set to the same 0.15" used for the white stripes. The Spacing element of the tool should be set to 1.09". Once added to the project the patterns will not be visible until their merge type is changed to negative. This can be done from the carving list or by right clicking on the circle. Once the merge type is changes the stars should be visible and the project is ready to carve.





Select "File", "Save"

*****IMPORTANT*****

Name file and click "Save"
to hard drive.



Select "File", "Upload"
Save to memory card.

➤ REFERENCE IMAGE

